Metadata Working Group

The NOAA IOOS Metadata Working Group (NIMWG) includes experts from several NOAA Line Offices. They held bi-weekly telecons to discuss IOOS metadata requirements.

How does your project/working group compliment or link with DIF activities?
Data integration efforts like IOOS face many technical barriers. Once those barriers are overcome, the real work – understanding the integrated picture – begins. That can not be done without understanding the data. That requires readily available and understandable documentation - metadata.

What is the current status? Provide brief update.
This working group formulated some recommendations to be presented to the IOOS Program at this meeting.

Milestones and Challenges

Success stories, project accomplishments, benefits.
The group used the GEO-IDE Wiki as a home base and a significant amount of material was added to that wiki by Ted (metadata) and Alex (DMAC Data Management Guide). We also came to understand how some simple capabilities that are build into the wiki (categories) could be helpful in arranging content and making it more findable.

In the time since this group started – the North American Profile of the ISO Metadata Standard has been approved and general consensus is forming across NOAA that the ISO metadata standards are the target at this time.

What have been the challenges (technical or strategic) to this project/working group? How were challenges resolved?
Engaging a volunteer community is difficult in a situation where everyone is already overwhelmed with their own tasks. This challenge has yet to be resolved.

Wiki: http://www.nosc.noaa.gov/dmc/swg/wiki IOOS Metadata Working Group

Next Steps/ Recommendations

What is the next phase of your project/working group?
We are using the best tools for collecting community input and guidance. We need to expand the contributing portion of the IOOS community.

Provide recommendations for going forward
We have recommendations in three areas: Standards, Tools, and Terminology and questions about a registry.

Metadata Recommendations: Standards

The Program needs to identify and document metadata content that is required to support all data related capabilities and services.

Guidance for representing that content needs to be provided for the ISO 191*, FGDC with appropriate extensions, and Directory Interchange Format (DIF) metadata standards, in that order of priority.

Content already identified as important includes: file formats and structures, data attribute details, data transformations, quality control procedures, quality flags (with definitions), and data error characteristics.

Metadata Recommendations: Tools

The Program needs to identify and help document metadata tools that are 1) being used by IOOS Data Providers and 2) other groups or programs to create and maintain standard metadata. This guidance should be focused and integrated with the service and capability descriptions described above.

The Program should identify, document, and help test tools and stylesheets (XSLTs) for translating existing metadata into the ISO 191* standards and for translating metadata content from the ISO Standards into other standards. If tools supporting specific translations can not be identified, the Program should consider leading the development of those tools.

Metadata Recommendations: Terminology

The Program should evaluate existing vocabularies related to ocean observations and identify a small number (2-3) to focus adaptation or development efforts on.

The Program should work with the Marine Metadata Initiative to engage the broader IOOS community in this process.

The Program should focus on vocabularies related to ocean observations rather than data taxonomies or other higher-level items.

Metadata Recommendations: Registry

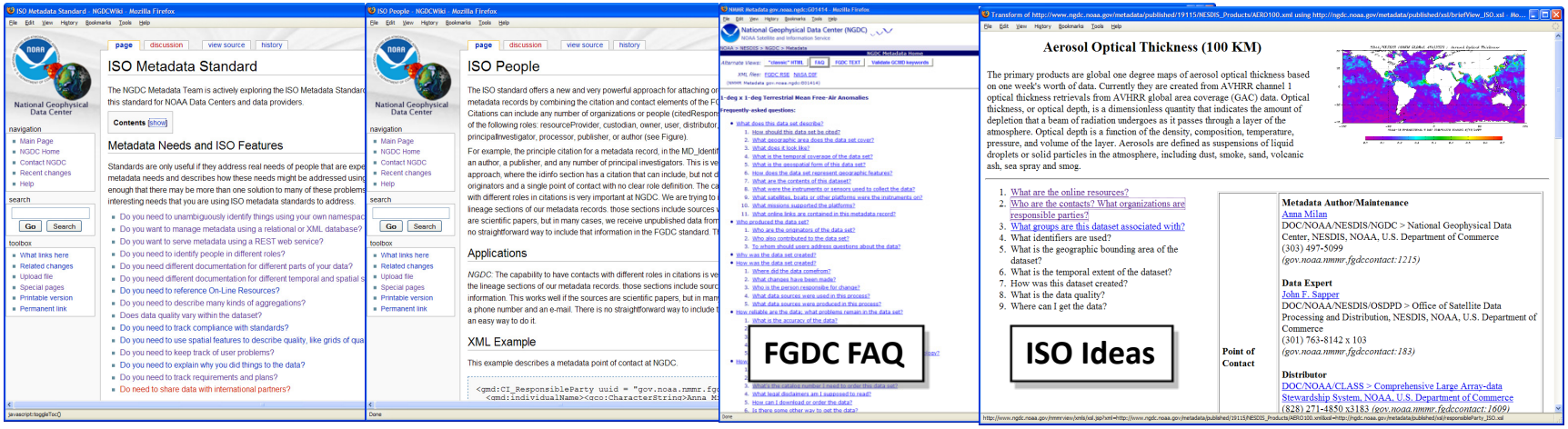
What would this registry contain (metadata, URNs)?

What is the scope of the registry? It would clearly include metadata for environmental datasets. Would it also include information about regulatory, administrative, legal enforcement, protected resources, habitat data?

What is the relationship between an IOOS registry and others? How can we use existing registries effectively?

How are the linkages between metadata in the registry and the data they describe tested and maintained?

Use Case to CRUD



Data Providers / Scientists | Metadata Standards Experts | Technologists

Scientific Question
Requirement
Use Case

Metadata Content
Independent of standard

Standard Implementation / Guidance
ISO 191*
OGC Capabilities
FGDC W/ extensions
NASA DIF
Dublin Core

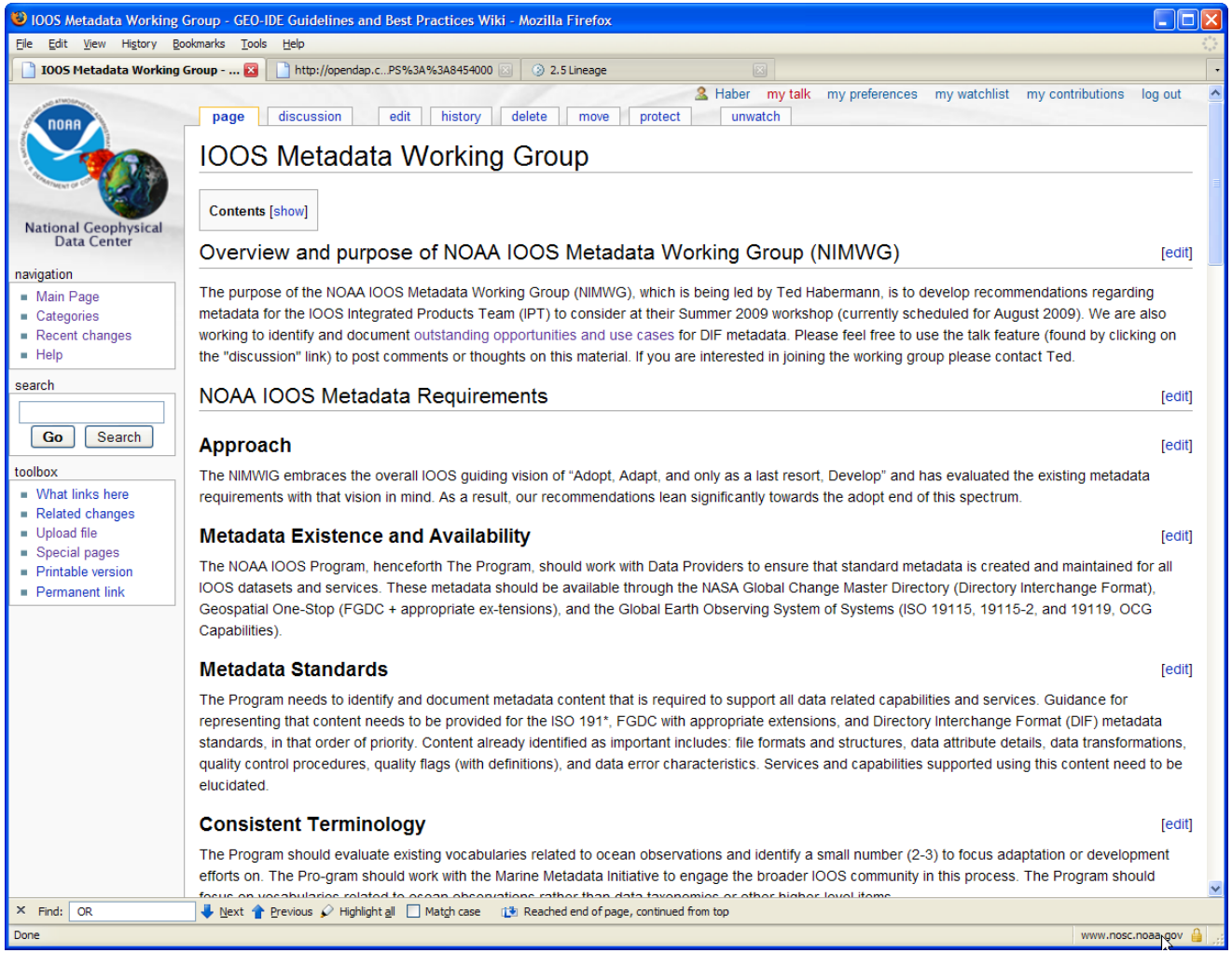
Presentation
Answers
XSLT, …

Metadata Management Interface (xForms, wiki)
Create / Read / Update / Delete

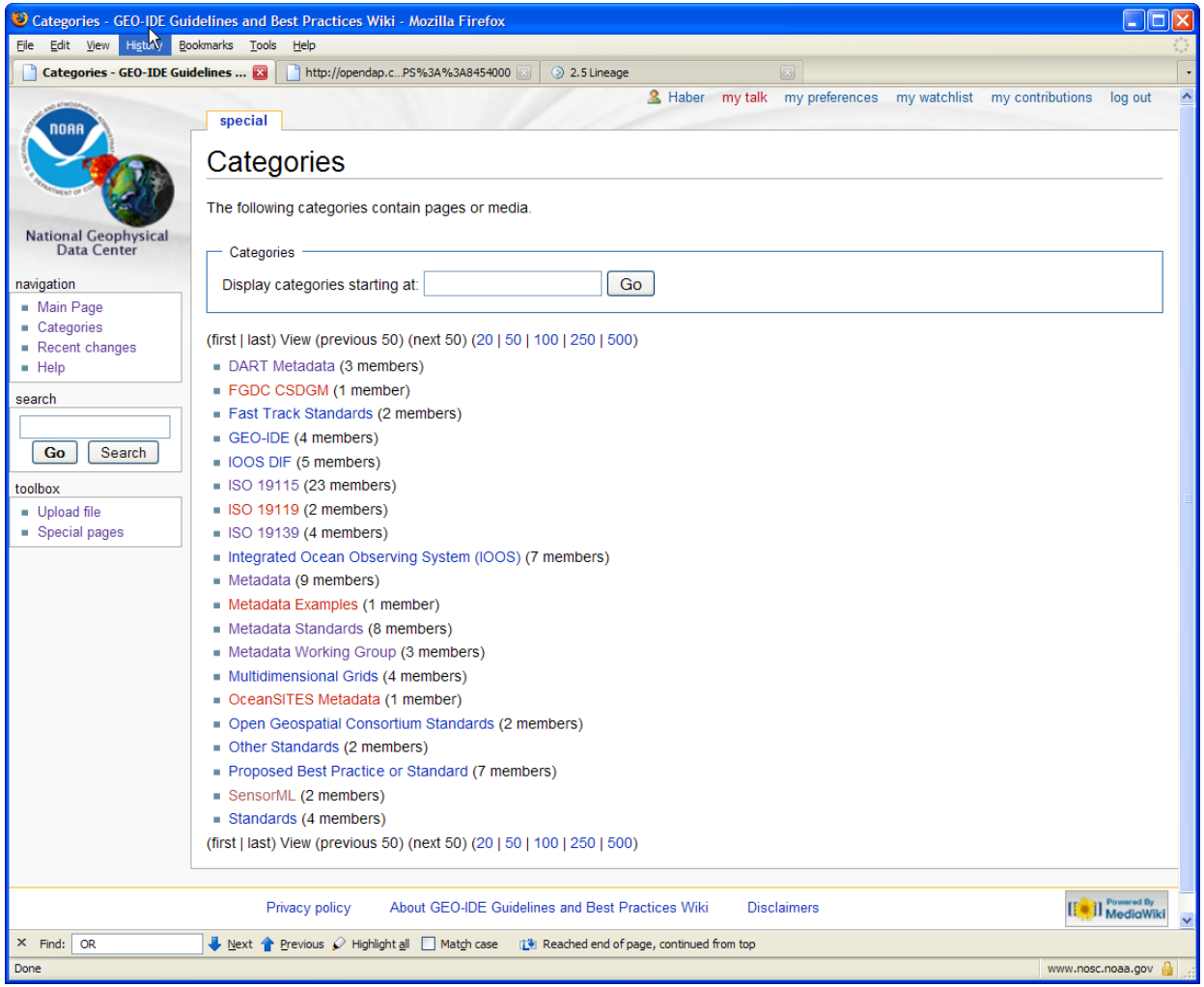
INTEGRATED OCEAN OBSERVING SYSTEM

IOOS

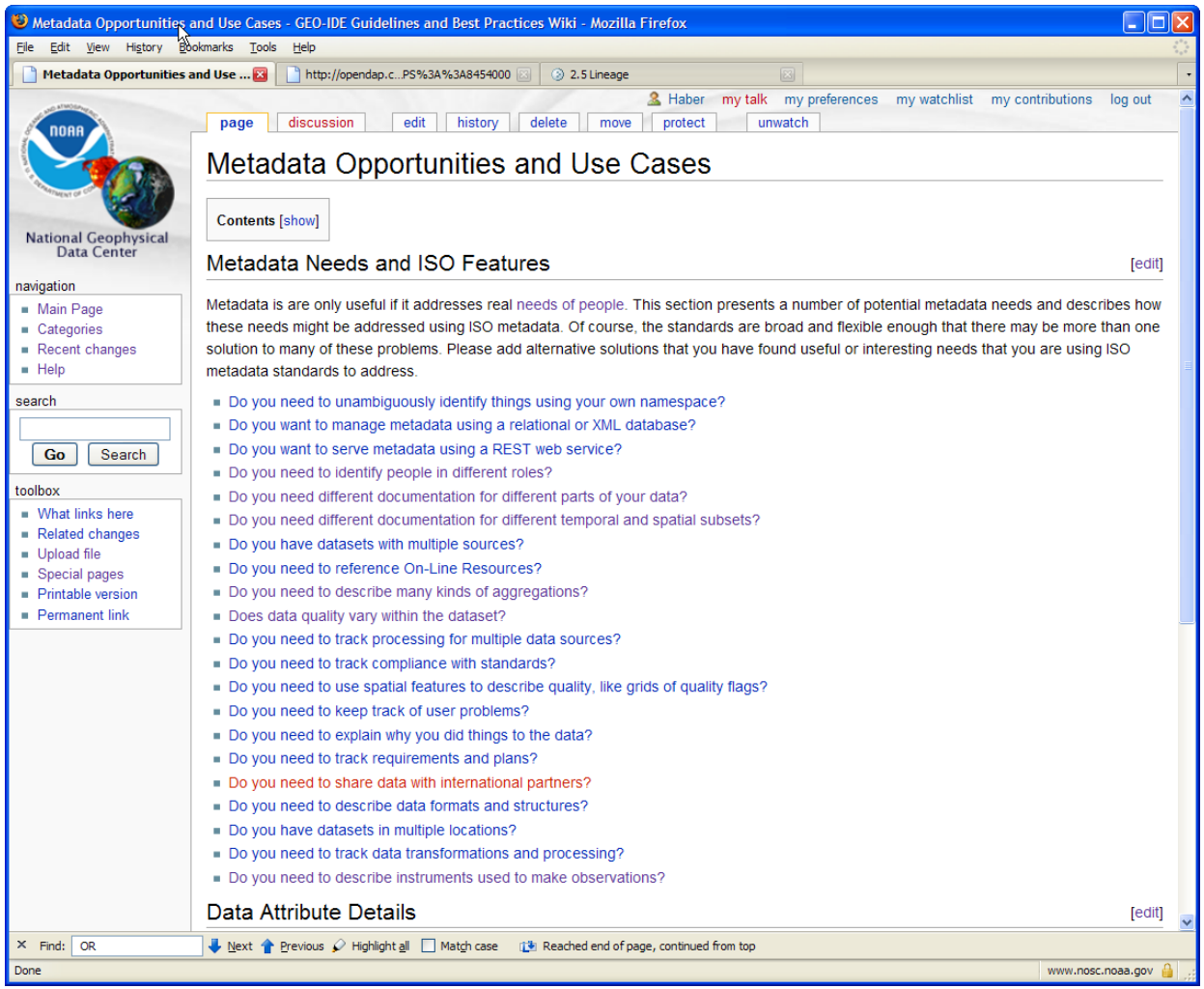
The Working Group Home Page



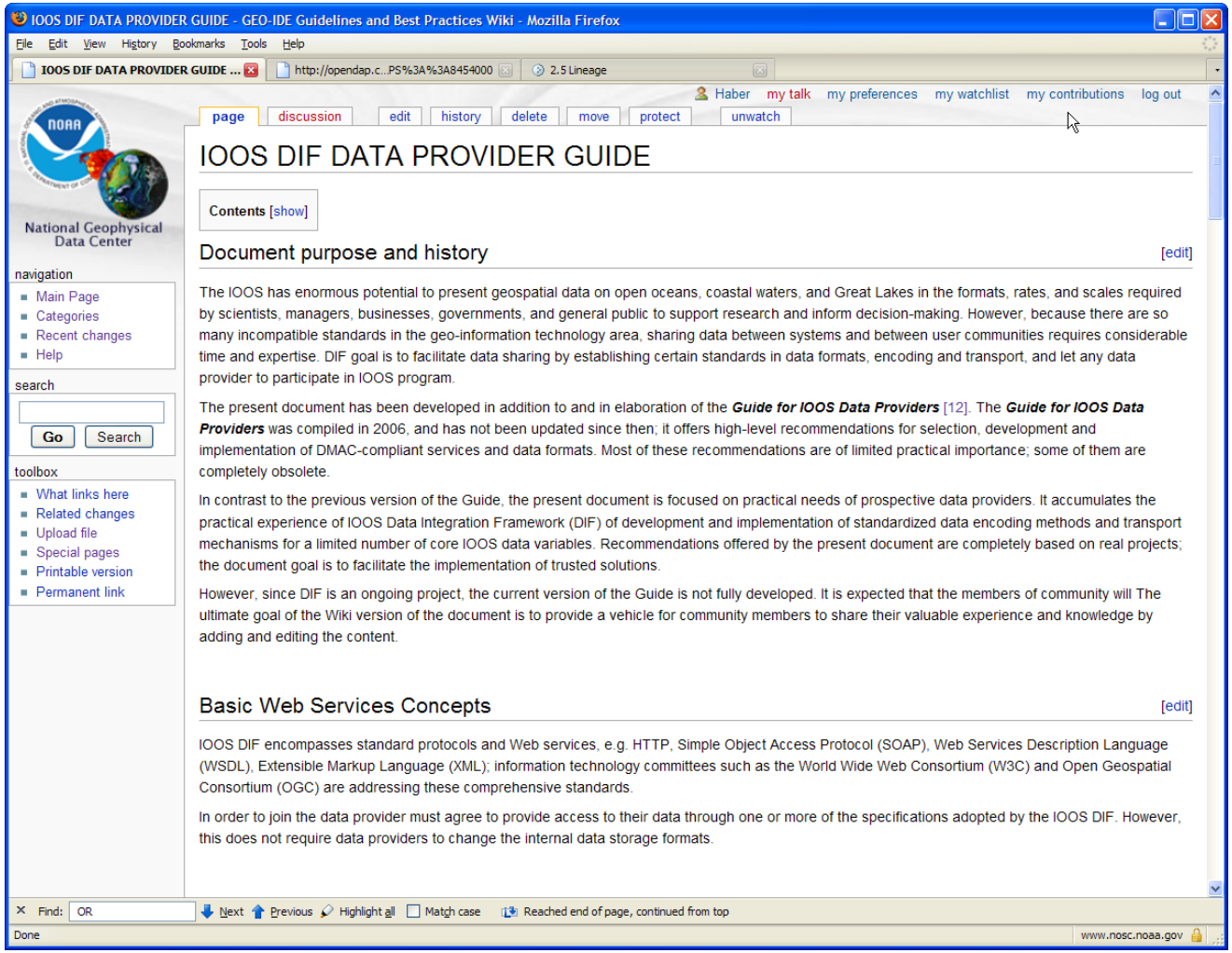
Categories Arrange Content



Opportunities and Use Cases



The Data Provider Guide



DART Instrument Descriptions